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Akira Yamamoto

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SQUIRE, SANDERS & DEMPSEY L.L.P.
8000 TOWERS CRESCENT DRIVE
14TH FLOOR
VIENNA, VA 22182-6212

EXAMINER

AFZALI, SARANG

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte AKIRA YAMAMOTO and KAZUYOSHI UMEDA

Appeal 2009-003404
Application 10/809,934
Technology Center 3700

Decided: September 10, 2009

Before JENNIFER D. BAHR, STEVEN D.A. McCARTHY
and KEN B. BARRETT, *Administrative Patent Judges*.

McCARTHY, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

1 STATEMENT OF THE CASE

2 The Appellants appeal under 35 U.S.C. § 134 (2002) from the

3 Examiner's decision finally rejecting claim 4 under 35 U.S.C. § 102(b)

4 (2002) as being anticipated by Chung (US 4,082,180, issued Apr. 4, 1978;

5 and finally rejecting claims 4 and 5 under § 102(b) as being anticipated by

1 Fannin (US 6,447,336 B1, issued Sep. 10, 2002).¹ We have jurisdiction
2 under 35 U.S.C. § 6(b) (2002).

3 We REVERSE.

4 Claim 5 depends from claim 4. Claim 4 recites:

5 4. A motorized roller comprising:
6 a roller body of the motorized roller;
7 a motor disposed inside the roller body;
8 a reducer which is disposed inside the roller
9 body, and reduces the rotation of the motor; and
10 a rotor which is disposed inside the roller
11 body, and connected with the reducer and the
12 roller body to transmit power of the reducer to the
13 roller body, wherein
14 the roller body comprises a first roller body
15 and a second roller body, and
16 an axial end section of a second roller body
17 side of the first roller body and an axial end section
18 of a first roller body side of the second roller body
19 are connected at a power transmission section
20 between the rotor and the roller body.

21 Chung describes a pulley including a “cylindrical rim” 30 and two end
22 discs 32, 34 secured to the cylindrical rim 30. (Chung, col. 2, ll. 6-11).
23 Chung’s pulley also includes a gear reducer 42 and a reducer output shaft
24 112 rigidly secured to the end disc 32. (Chung, col. 2, ll. 11-14 and
25 col. 2, l. 65 – col. 3, l. 3).

¹ A rejection of claim 4 under § 102(b) as being anticipated by Agnoff (US 5,088,596, issued Feb. 18, 1992) was withdrawn in the Examiner’s Answer. (Ans. 2-3). The Examiner objects to claim 6, but indicates that the subject matter of the claim is allowable.

1 A first issue on which this appeal turns is:

2 Have the Appellants shown that the Examiner erred in finding
3 that Chung's gear reducer 42 is a reducer; that Chung's shaft
4 112 is a rotor; that Chung's cylindrical rim 30 is a first roller
5 body; that Chung's end plate 32 is a second roller body; and
6 that Chung discloses the first roller body and the second roller
7 body connected at a power transmission section between the
8 rotor and the roller body? (*See* Reply Br. 10; Ans. 3-4).

9 Figure 2 of Chung depicts the end disc 32 as being secured to the
10 cylindrical rim 30 so that the outer peripheral surface of the end disc 32 is
11 adjacent the inner peripheral surface of the cylindrical rim 30. Assuming for
12 purposes of this appeal only that Chung's cylindrical rim 30 is a first roller
13 body and Chung's end plate 32 is a second roller body, Chung's first and
14 second roller bodies are connected at the outer peripheral surface of the end
15 disc 32.

16 Chung's shaft 112 is affixed in a tapered bushing 114 disposed in a
17 hub 116. The hub 116 is rigidly secured to the end disc 32. (Chung, col. 2,
18 1. 65 – col. 3, 1. 3). Power is transmitted from the shaft 112 to the
19 combination of the end disc 32 and the cylindrical rim 30 at the section
20 occupied by the tapered bushing 114 and the hub 116. (*See* Chung, col. 3, ll.
21 3-4 (disclosing that the shaft 112 drives the pulley 12) and fig. 2). Assuming
22 for purposes of this appeal only that Chung's gear reducer 42 is a reducer;
23 that Chung's shaft 112 is a rotor; that the combination of Chung's
24 cylindrical rim 30 and end plate 32 is a roller body, the power transmission
25 section between the rotor and the roller body (that is, the section where
26 power is transmitted from the shaft 112 to the end plate 32) is the section

1 occupied by the tapered bushing *114* and the hub *116* near the inner
2 peripheral surface of the end plate *32*.

3 Figure 2 of Chung depicts the tapered bushing *114* and the hub *116* as
4 occupying a space or section separated from the outer peripheral surface of
5 the end disc *32* by the radial extent of the end disc *32*. Assuming for
6 purposes of this appeal only that Chung's gear reducer *42* is a reducer; that
7 Chung's shaft *112* is a rotor; that Chung's cylindrical rim *30* is a first roller
8 body; that Chung's end plate *32* is a second roller body, the power
9 transmission section between the rotor and the roller body is spaced from the
10 connection between the first and second roller bodies. The Appellants have
11 shown that the Examiner erred in finding that Chung discloses a first roller
12 body and a second roller body connected at a power transmission section
13 between the rotor and the roller body.

14 Fannin discloses a motorized conveyor pulley *80* including an "outer
15 tube" *88* and outer plates *104*, *108*. The outer tube *88* and the outer plates
16 *104*, *108* encase a gear train *84*. (Fannin, col. 4, ll. 9-11 and 34-44). Figure
17 4 of Fannin depicts the outer plate *104* secured to an outer ring *89* by a
18 plurality of bolts at an axial end section of the end plate *104*. (*See also*
19 Fannin, col. 4, ll. 44-45). The outer ring *89* is secured to the outer tube *88*
20 by a plurality of bolts. (*Id.*)

21 A second issue on which this appeal turns is:

22 Have the Appellants shown that the Examiner erred in finding
23 that Fannin's gear train *84* is a reducer; that Fannin's outer ring
24 *89* is a rotor; that Fannin's outer tube *88* is a first roller body;
25 that Fannin's outer plate *104* is a second roller body; and that
26 Fannin's rotor is connected with the reducer and the roller body

1 to transmit power of the reducer to the roller body? (*See Reply*
2 Br. 13; Ans. 4).

3 The gear train 84 includes a ring gear 92. The ring gear 92 is secured
4 to the outer plate 104 via a mounting plate 102 by a plurality of fasteners
5 105. (Fannin, col. 4, ll. 19-22). Fannin discloses that the ring gear 92
6 transfers energy through the mounting plate 102 to the outer plate 104.
7 (Fannin, col. 4, ll. 56-57). The outer plate 104 drives the outer tube 88
8 (Fannin, col. 4, ll. 58-61), necessarily through the outer ring 89.

9 Assuming for purposes of this appeal only that Fannin's gear train 84
10 is a reducer; that Fannin's outer ring 89 is a rotor; that Fannin's outer tube
11 88 is a first roller body; and that Fannin's outer plate 104 is a second roller
12 body, Fannin does not disclose a direct connection between the rotor and the
13 reducer. Fannin's ring gear 92 transfers power to the outer plate 104 and
14 Fanning's outer plate 104 transfers power to the outer ring 89. Although
15 both Fannin's outer ring 89 and Fannin's ring gear 92 (which is a component
16 of the gear train 84) are connected to the outer plate 104, Fannin discloses no
17 direct connection between the outer ring 89 and the ring gear 92 in the sense
18 of being connected to transmit power of the gear train 84 to the roller body
19 88, 104. In other words, the Appellants have shown that the Examiner erred
20 in finding that Fannin discloses a rotor connected with a reducer and a roller
21 body to transmit power of the reducer to the roller body.

1 DECISION

2 We REVERSE the Examiner's decision rejecting claims 4 and 5.

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4 REVERSED

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6 Klh

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